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DO TOO MANY STUDENTS FAIL?

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There was a time, and that well within the memory of most of us, when the teacher in whose classes a comparatively low percentage of pupils passed was considered good on the basis of this fact alone. He was given the name of being a man of high standards and rigorous requirements. Conversely, the teacher, 90 per cent of whose pupils passed, at once laid himself under the suspicion of being lax, easy, and tender-hearted to a fault.

In recent years a new view has come to be taken by the profession generally. No longer does the teacher whose pupils fail in large numbers enjoy, on account of that fact alone, a reputation for thoroughness and strength. This change is in nowise due to a relaxation in educational demands, but simply to the persistent and ever-recurring inquiry: "Why must so many pupils fail? Is it not possible that many of these failing pupils might have succeeded had they been given sufficient encouragement and individual care and help?"

It is further being pointed out that the criterion, "The larger the percentage of failures, the higher the standard," is an exceedingly dangerous one; for this method of measurement really puts a premium upon poor teaching; it encourages obscurity and abstruseness; it offers absolutely no incentive to the active, alert, conscientious teacher who is warmed by a constant desire that his pupils

should succeed and grow and learn; it holds out no inducement to a teacher to take freely of his time in order to explain things to the backward students, or to seek to understand the sources of their difficulties. On the other hand, the teacher who is possessed of the new ideals says to himself and his class: "Here are the things we must accomplish during the term. We shall all work together for their accomplishment. I am here to help you and not to puzzle you. If we work hard together we shall succeed."

At this point it should be noted that the high school presents a set of conditions where it is peculiarly necessary that the pupil be encouraged to remain. Many parents are making sacrifices to keep their boys in school. In such cases the boy himself probably feels the call to be out and earn something. Besides, he is at a period of life when failure is least easily borne, and when the discipline of adversity is most severe and least bearable. He is at the climax, the turning-point, of his early youth. Encouragement may send him on; discouragement may send him back. It is essential that the teacher should recognize his responsibility in all these peculiar relationships, and that he should be an active force in saving and helping, and not an inert mass, or worse, in the way of educational progress of the youth. If the student is a girl, the foregoing conditions, and added ones, obtain. During her high-school years her physical organization undergoes a trying and dangerous change, fraught with peril and full of portent. Many days she is in school when by all rules of health she should be almost anywhere else instead. No doubt many girls have left school, ill or discouraged, because of the lack of a kind word, or a bit of sympathetic counsel at just the right time.

The report of the Commissioner of Education for 1909-10 (the latest report giving these particular data) shows that in the public high schools reporting, there were 662,189 pupils studying mathematics, and 844,031 studying English. The increasing importance of the high-school problem is partly indicated by the fact that, whereas in 1889-90 there were 2,526 public, and 1,632 private, high schools, enrolling a total of 367,003 pupils, in 1909-10 there were 10,213 public, and 1,781 private, high schools, enrolling a total of 1,032,461 pupils, an increase of 208 per cent in high-school enrol-

ment as against a 47 per cent increase in population during the same period of time. All these facts show the increasing demand for secondary-school training. Business and professional men, laborers and manufacturers, all are sending their children to the high school. These schools, once exclusive, are fast becoming universal.

Since this largely patronized high school is comparatively new, we are only beginning to realize its possibilities. We are in the midst of a readjustment of the curriculum to the vital needs of the pupils. We are beginning to see that the high school is not a "poor man's college." It is not a college at all. Its pupils are but children when they enter, and they have not yet passed the period of adolescence in their later high-school years. They must not be treated as responsible adults are treated, but must be watched and tended. Their way must, to a considerable degree, be made plain. While they must not be left unacquainted with hard work, they should be furnished with a proper amount of straw for their bricks. High-school men are now recognizing the fact that the schools are losing too many of their pupils, and that too many are being compelled to take work over. We are beginning to see that the large percentage of failing and "left" pupils is an argument for those who contend that our high schools are a poor financial investment. We are beginning to see that we must cease eliminating and retarding so many of our pupils, and that we must bend our efforts toward the elimination of the causes of their poor work and discouragement.

Some of the causes of elimination and retardation are: illness, various physical defects, dulness, indifference, need of pupil's aid in supporting the family, and so forth. At first it may appear that these causes are beyond the teacher's control, yet in the case of illness, for example, is it not true that a word of warning to the student might have prevented the attack of cold or grippe? Or, in the case of withdrawal to help support the family, how many parents might have been induced to leave their children in school if they could have been shown how the education their children were receiving was going to be of practical help in their everyday lives and that at no distant time? Dulness, indifference, lack of attention may all be thought, at first glance, to be things that may

be laid at the pupil's own door. Yet how many times may a teacher, by personal inquiry, ascertain the facts which are at the base of this indifference! How often will personal interviews discover little misunderstandings of work previously gone over—misunderstandings that never would have come to light in the routine of the classroom, but which have been in the way of successful work!

Let us suppose that by extra personal effort—by visits to a few homes of failing students, by quiet talks, by face-to-face exhortation—each teacher were to make it possible for one more student to remain in school one more full year. Allowing forty teachers for a school of a thousand pupils, this extra effort would mean that 4 per cent more pupils, or forty in each thousand, would be held under the influence of the high school for an extra year. When we consider the possibilities with reference to the total number of high schools and high-school pupils in the country, our 4 per cent becomes 45,259. The increased value of these young people to their communities as a result of this added year in high school, and the increased enrichment of their own lives, should make us consider even more carefully our high-school problems.

During the past year we conducted a questionnaire, the purpose of which was to throw light on the problem of retardation and elimination, particularly in the studies of English and mathematics, in our high schools. We addressed our inquiries to over three hundred high-school principals in all parts of the United States, and received about sixty replies which were more or less complete.

A summary of the data obtained based on figures from 46 high schools, reveals, among others, the following facts: In these schools, during a given semester, a total of 33,276 pupils were studying English, and 24,404 were studying mathematics. Of the total enrolment in English, 27,101, or 81.44 per cent, passed, and of the total enrolment in mathematics, 18,364, or 75.25 per cent, passed.

Of these 46 schools, 18 had less than 400 pupils enrolled in English. Taking these as one group, we find 4,096 enrolled in English, of whom 82.10 per cent passed; in mathematics, 3,684 were enrolled, of whom 75.55 per cent passed. Another group, made up of those schools whose enrolment in English was over

800, presents the following figures: Total enrolment in English, 21,003; total passing, 16,932, or 80.62 per cent. In mathematics, total enrolment, 14,683; total passing, 10,972, or 74.72 per cent. The third group of schools, those whose total enrolment in English was between 400 and 800, shows a total enrolment in English of 8,177; passed, 6,806, or 83.23 per cent; in mathematics, enrolment, 6,037; passed, 4,572, or 75.73 per cent.

The figures for these groups are interesting in many ways, but their main bearing upon our problem is the light they throw upon the questions: "What has the size of the high school to do with the percentage of those passing? Does not the large school tend to lose a larger percentage of its pupils?" So far as our figures may be given any weight, they seem to point to the following facts: (1) There is not a great deal of difference between the large and small high schools in the matter of the successful passing of pupils; in English this difference amounts to but 1.48 per cent, and in mathematics but 1.83 per cent. (2) But while, both in English and in mathematics, the very large schools show the smallest percentage passing, in English it is the group of middle-sized schools, and in mathematics the group of smallest schools that make the best showing. (3) It is pertinent to note here that the large schools vary among themselves to a truly startling degree with respect to the percentage of those passing. The lowest percentage in English in this group is 69.0 per cent and the highest 89.7 per cent, a difference of 20.7 per cent, or 207 pupils in each 1,000! Further, this percentage of 89.7 is made in a school that enrolls 1,275 pupils in English. In mathematics the figures are still more startling. The lowest percentage in mathematics in any school of this group is 59.5 per cent, and the highest is 83.8 per cent, a difference of 24.3 per cent, or 243 in each 1,000 students! The largest enrolment any school shows in mathematics is 2,019; in this school 77.6 per cent of the students in mathematics pass, which is 2.35 per cent above the average for mathematics in all the other schools. (4) Not only do the schools in this group vary greatly, but the same school may show striking facts when its records in different subjects are compared. One large western high school passes 84.8 per cent in English, and but 72.5 per cent in mathematics. Two other large

schools pass 89.4 per cent and 86.3 per cent respectively in English, and 74.3 per cent and 71.6 per cent respectively in mathematics. Thus both of these schools are above the average in English, and below it in mathematics. On the other hand, one far-western school is 4.9 per cent below the average in English, and 4.1 per cent above it in mathematics. (5) Though the middle-sized schools show the largest passing percentage in English, they vary among themselves even more strikingly than do the larger schools. The lowest passing percentage here is 54.9, and the highest is 94.1, the enrolment being 619 and 723 respectively. The difference in percentage here is 39.2 per cent, or 392 pupils in 1,000.

To summarize these data, then, with regard to the influence of the size of the school upon the percentage passing, what slight difference there is appears to be against the largest schools; but the variations among the different schools of the same group, and the variations among different studies in the same school, are so great, and the high percentages obtained in *some* schools of *each* group, all show that size itself is far from the main factor in determining efficiency: indeed, that it comes near to being a negligible factor.

There is a further question with a very direct bearing upon the one just discussed. It is: In which group of schools does the proportionately largest number of students drop out? We approached this question with the notion that the answer would be: "The largest schools, of course." But whether because of better truancy laws in larger cities, or better organization of the faculties in the matter of delinquency reports, or more efficient clerical forces to aid in holding absent and tardy students to account—at any rate there is not much difference between the showing of the small schools and that of the large ones. In English, the small schools lose 7.32 per cent, the middle group, 7.77 per cent, and the large schools, 8.59 per cent; in mathematics, the poorest showing is made by the middle group—10.7 per cent—while the small schools lose 7.46 per cent, and the large ones, 7.73 per cent. Again in this matter, the wide variation among the different schools of the same group shows that other factors than the size of the school must be held mainly responsible for the numbers who leave before examination.

At this point we should like to call attention to some facts that have puzzled us: (1) We have reports from four southern schools, which show the following percentages as passing in English: 69.0, 65.0, 91.7, and 54.9; and in mathematics: 59.5, 60.1, 49.2, and 57.9 respectively. Why are these figures so low? We do not know. Their average passing percentages, based on their total enrolments in English and mathematics, respectively, are but 66.52, and 58.44. (2) Why should a great school of the Middle West drop to 75.4 per cent in English, and come up to 77.6 per cent in mathematics? It has 2,019 students in mathematics, and 2,640 in English. The school is studying the problems of retardation and elimination, and yet the results do not appear. These points show some of the surprises that are in store for him who would investigate a problem of such wide reaches and various ramifications.

Coming to the question of the relative frequency of failures in the various subjects of the curriculum, we find some interesting facts. Mathematics maintains its reputation as a high-school bug-bear by presenting the lowest passing percentage in 25 out of 46 schools from which complete reports were received, and by being the only one out of all the subjects failing to be highest in at least one school.

Perhaps, because of this reputation of the subject, the teacher is too frequently content to say that the cause of the large mortality in mathematics is lack of mental ability. The data we obtained do not bear out this conclusion. We asked the question: "Do you find that proportionately more students lack mental ability in mathematics than in English?" The answers were: Yes, 25; No, 21. "Than in foreign languages?" Yes, 23; No, 27. "Than in science?" Yes, 19; No, 25. "Than in history?" Yes, 27; No, 19. It would seem that the principal trouble in mathematics is not a general lack of mathematical ability on the part of the student. We believe rather that it is the greater dependence of each lesson upon those preceding. For example, if the pupil misses or fails to understand fully the work in lowest common multiple, he has trouble in addition and subtraction of fractions and in the solution of fractional equations.

That much of the above difficulty can be overcome is shown by the following facts taken from reports received. In schools employing at least one of the special methods for minimizing retardation, described elsewhere in this paper, there was a total of 9,771 students taking mathematics, with 7,587, or 77.6 per cent, passing, while in schools not employing such special methods there was a total of 9,164 pupils taking mathematics, 6,608, or 72.1 per cent, of whom passed. It cannot be definitely stated that the difference in number of pupils passing was due to the special effort; it could be due in part at least to other causes, but the figures are very significant. Again, out of the 28 high schools having an enrolment of over 400 in English 15 have a passing percentage in mathematics above the average passing percentage of all schools sending data. Of these 13 employ one or more of the special methods referred to above, while but few of the schools with low passing percentages employ such methods.

Two other interesting facts appeared which may help in the analysis of the causes of large numbers of failures: (1) Some schools show a wide divergence as between different subjects: for example, Cleveland, Elgin, Schenectady, Portland (Me.), and many others. (2) Aside from mathematics, each subject makes the best showing in some schools, and the poorest showing in others. These facts indicate unmistakably that if any particular school finds that a regularly low percentage of its students is passing in any of its subjects the situation is a cause for investigation; for the experience of these 46 schools shows that it is possible for relatively high percentages of students in good schools to pass any subject in the curriculum. Conversely, they show that even in the so-called "easier" subjects, and in Junior and Senior elective work, where we may expect a measurable degree of enthusiasm and earnestness on the part of the students, it is possible to have a relatively large number of failures. In other words, whatever may be true of the general standard of any school or of the relative ease or difficulty of the various subjects, one factor must constantly be brought into the reckoning, and that is the teacher behind the desk.

This brings us to the vital part of our inquiry. We have seen that in English the experience of these schools has been that of

each 1,000 pupils who entered only 814 passed the subject successfully, 82 dropping out before reaching the examination, and 104 failing in the examination. In mathematics only 753 of the 1,000 passed, 84 dropping out during the term, and 163 failing in the examination. Further, we have seen that in some schools numbers failing and dropping out were nothing less than startling; and we have found schools, on the other hand, which, we have every reason to believe, are maintaining a high degree of excellence, but in which a gratifyingly large percentage of students pass. We have seen that figures will not warrant us in explaining this set of facts on superficial grounds; that the varying degree of difficulty in the different subjects does not account for more than a small part of these facts; that the teacher seems to be the principal determining element, and that he must be the one to look to if we are to increase the efficiency of our schools. What, then, are the teachers in these schools of high efficiency doing to prevent their students from failing and leaving school? And what are they doing with pupils who have already shown weakness?

The first question we asked on this latter point was this: Do you have special classes for those who have failed? Of those who replied, 6 said yes and 36 said no. Of the 6, 2 have tried the other plan (that of scattering repeaters through other classes); and of the 36, 17 have tried the plan of repeater classes, and have discontinued it. Among the reasons given for separate classes are these: (1) Other classes are not held back by slow or indifferent pupils. (2) The work can be better suited to the needs of the slow pupils. (3) In English, where students have knowledge of literature read, but cannot write, they are enabled to read different selections. The principal arguments against failure classes are: (1) Failure classes lack any standard of excellence. (2) There is no incentive for effort, no enthusiasm. (3) Repeaters know some part of their subject-matter well, and in general classes they are able to excel in these parts—an opportunity which they highly appreciate. (4) Failure classes have a stigma attached to them. (5) Discipline is difficult in such classes.

Two principals point out an important distinction in this matter: If a failure class can be small, they say, it may constitute the best

solution of the difficulty. The overwhelming sentiment of the replies received, however, is against segregation. The figures seem to indorse this judgment, so far as they have any bearing, for the schools with the high passing percentages are almost a unit in scattering their weak pupils. While two of the schools who segregate their failures make a good showing, one of the lowest more than offsets this average.

Besides the repeater class plan, the following devices are being successfully used: (1) special teachers, to give their whole time to weak pupils; (2) special periods of the day definitely set apart for this work; (3) teachers take turns in staying after school or in working extra hours with weak pupils; (4) immediate consultation with parents after one or two failures; (5) immediate consultation with pupil when he begins to get behind; (6) supplementary "make-up" classes.

Here are six specific policies, one or two, or all, of which are being employed by various schools to raise their standard of efficiency. As we study our tables and note the schools that are making a good showing in the success of their students, we find them, almost without exception, to be those that are making use of some of these specific plans. For instance—

Berkeley: We try not to let the pupil get far behind. Re-examination every week.

Lane Technical: Pupils who fail in two or more subjects any month are required to bring their parents. Two weeks from the giving-out of cards all pupils who failed are required to bring a statement of progress from teacher. If no improvement is shown, they must get the card signed at home.

Denver: Seventh-hour class.

Fort Wayne shuts the barn door before the horse gets out: Classes should not exceed 15 the first year, 20 the second, nor 25 anywhere. There should be a special teacher besides.

Evansville: Heads of departments have special coaching hours.

And so we might go on. Occasionally we find schools with high efficiency which do not indicate that they are employing any special plan. But the chief value of facts collected as ours are must lie, it seems to us, in their general trend. Individual instances of what may seem to constitute disquieting exceptions must always appear in large groups of facts like this. They may be due to in-

complete reports, or to clerical errors, or to abnormal conditions that happened to affect one semester or one study. They do not, it seems to us, invalidate the general conclusion that those schools that are taking a live and intelligent interest in their weak and backward pupils are getting results that justify their efforts.

Let us consider one more specific field of inquiry and that is the physical examination of failing pupils. To the query: "Do you make a physical examination of failing pupils?" 15 schools reply that they make such examination regularly; 7, that they make the test sometimes; 3, that they make no such test. The rest do not answer.

It seems to us that these replies indicate that our schools are not living up either to their duties or to their opportunities in this matter. True, as was pointed out by several of our correspondents, "that matter is taken care of in the grades." But that argument neglects the fact that many physical ills may overtake the student after he has left the grades. It ought not to be necessary to argue the matter here, it seems to us. Modern psychology and physiology have shown us too clearly the close interaction of body and mind; Hall's researches in the period of adolescence have set forth the dangers besetting youth in this period too plainly to permit us to seek excuse for laxity in this matter. A little wise counsel from a good physician might serve more effectively than many words of warning from a teacher, when it comes to keeping a young girl from being a young lady before her time through too many dances and too late hours. A physician's advice should be sought before a boy is allowed in athletics. At any rate, his judgment should be brought into the problem when there are headaches or colds or other "little" ills that are so frequently reported. And of course the eyes and ears should always be watched. Further, abnormality of sight or hearing should always be reported by the grade principal when the pupil enters the high school. Instances where we have been unjust toward a pupil who was failing simply because he could not see, or could not hear, are too fresh in the minds of all of us teachers to permit us to question the necessity for regular physical examination of failing pupils.

In conclusion, then, what shall we say of the efficiency of our

high schools? As at present administered, so far as we may judge by the 46 schools that make up our data, 18.56 per cent of our pupils in English do not pass successfully a given semester's work; in mathematics, the figures are 24.75 per cent. If these figures are representative (and we believe they are) and if the enrolment in our high schools in this year (1912-13) has reached 1,400,000, as it no doubt has done, judging by its past rate of increase and by the latest report of the United States Commissioner of Education; and if we assume that 1,150,000 pupils are studying English (a conservative assumption, since, according to the reports in which the matter is dealt with, 82 per cent of high-school pupils study English), then 213,440 of these pupils are due to fail each semester this year. And on the same basis, of the 900,000 pupils who entered upon the study of mathematics, 222,750 are due to fail. On the same basis, 94,445 are due to drop out of English each semester this year, without taking the examination, which, in English, usually means dropping out of school, for English is usually required; and 72,360 will drop out of mathematics.

In some of these cases, the best ends of all concerned—students, teachers, parents, and taxpayers—will best be served by dropping these students from the roll of the school. There can be no question that the ends of justice and wisdom will best be served by the failure of some of these pupils in examination and by the repeating of their work. A few are doomed to failure from the start. Inadequate preparation, ill-health, "chronic and insuperable aversion to all kinds of labor," as Irving would have put it, native slowness or ineptitude, all these factors must be figured into our account of the matter; but do these and all kindred factors account for the 222,000 and the 213,000? We cannot believe that they do. We must remember that at the start of a semester's work most of our pupils are well intentioned. They want to pass. They expect to pass. They plan on passing and are willing to work in order to pass. It is after the term is under way that the collar begins to gall the neck, and the heart begins to get weary, and the temper begins to be unstable. It is here, likewise, that weaknesses in health begin to tell. It is undoubtedly here in these early months that many, if not most, of the failures are prepared for. How wise, then, seems

the counsel of those principals who say: "Don't let them get far behind." "Call in their parents." "Get a statement from their teachers two weeks after failure report." "Have pupil and teacher talk the matter over privately, so that the pupil's point of view may be ascertained, and extenuating circumstances may be learned."

Just how many pupils there are who might be saved, and who ought to be saved, by such added vigilance, it is impossible to say. But it is patent that the number is astoundingly large. Our high schools must reach a higher degree of efficiency, or else they must recognize the fact that they are trying to do something that is out of harmony with the spirit of the age. It is not right that twenty or twenty-five out of each one hundred pupils who come to them for training should be pronounced failures at the end of a trial. It is not profitable from the standpoint of the taxpayers; it is not fair to students or parents; most important of all, it is not necessary, if proper precautionary measures are employed. In no phase of a teacher's work will a little extra effort, a little interest outside of routine work, pay larger dividends, than will effort right here with the faltering student.